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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,857	11/01/2000	Sheryl Leigh Woodward	2000-0072	3719

7590 08/25/2005  
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EXAMINER

USTARIS, JOSEPH G

ART UNIT PAPER NUMBER

2617

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/703,857

Applicant(s)

WOODWARD, SHERYL LEIGH

Examiner

Joseph G. Ustaris

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 11, 12, 14, 15, 17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 1, 5, 13, and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This action is in response to the amendment dated 22 September 2004 in application 09/703,857. Claims 1-6, 9, and 11-20 are pending. Claims 1, 9, and 14 are amended. Claims 19 and 20 are new.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Fig. 3 step 335 (page 8 line 27). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claim 1 is objected to under 37 CFR 1.75. Claim 1 recites the limitation "said user premises" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 is objected to because of the following informalities: Claim 17 recites "include one ell fiber". Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 6, 11, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Beierle et al. (US006538781B1).

Regarding claim 1, Beierle et al. (Beierle) discloses an interface apparatus that has an “optical receiver responsive to an application optical signal” (See Fig. 1, network node 16), “signal distribution wiring within the user premises” (See Figs. 1 and 4, lines 18), a “first adaptor circuit interposed between the wiring and the optical receiver, and operable to select at least one channel transmitting signals” (See Fig. 3, optical switch matrix 39; column 5 line 64 – column 6 line 24) that is modulated in an optical signal or “a first format”. There is also a “second adaptor circuit connected to the wiring within the user premises and operable to receive signals outputted on the at least one channel and convert the outputted signals to a format compatible with the customer premises equipment (CPE)” (See Fig. 4; column 6 line 49 – column 7 lines 9), where the set top box (STB) converts the optical signals to electrical signals or “different from a format of the signals outputted on the at least one channel” in order to used by televisions and other CPEs.

Regarding claim 2, the first adaptor circuit includes a band selector operable to select the at least one channel from a plurality of available channels (See Fig. 3, optical switch matrix 39).

Regarding claim 6, the signals received from the first adaptor circuit include one or more of digital video signals, digital audio signals, and data (See Figs. 5 and 6, TV, video, telephony, wideband).

Regarding claim 11, Beierle discloses a method of converting signals received from a head-end over a distribution plant including at least one fiber-optic link to a format compatible with CPE (See Fig. 1 and 5). The system "receives the signals in a first format from the head-end in a downstream bandwidth" (See Figs. 3 and 5), "selecting at least one channel in the downstream bandwidth carrying some of the received signals" (See column 5 line 64 – column 6 line 24), "transmitting the signals carried in the selected at least one channel on the selected at least one channel to an adaptor circuit" (See Figs. 3 and 4), and "converting the signals received on the selected at least one channel to the format compatible with the CPE at the adaptor circuit (See Fig. 4; column 6 line 49 – column 7 line 21).

Regarding claim 19, Beierle discloses an interface apparatus that has an "optical receiver responsive to an application optical signal" (See Fig. 1, network node 16), "signal distribution wiring within the user premises" (See Figs. 1 and 4, lines 18), a "first adaptor circuit interposed between the wiring and the optical receiver, and operable to select and output a channel of signals" (See Fig. 3, optical switch matrix 39; column 5 line 64 – column 6 line 24) that is modulated in an optical signal or "a first format" from a

Art Unit: 2617

plurality of channels (See Fig. 3, 0<sub>1</sub>-0<sub>6</sub>), where each channel carries "distinct sub-channels" (See column 5 lines 30-63). There is also a "second adaptor circuit interposed between the wiring and CPE, and adapted to convert the channel of signals from the first format to a second format that is compatible with the CPE" (See Fig. 4; column 6 line 49 – column 7 lines 9), where the set top box (STB) converts the optical signals to electrical signals in order to be used by televisions and other CPEs, where inherently the television or CPE is enabled to select a sub-channel from among the sub-channels.

Claim 20 contains the limitations of claim 19 and is analyzed as previously discussed with respect to that claim. Furthermore, Beierle suggests the use of multiple STB or "at least two second adaptor circuits", where each STB would convert the signals so they can be used by CPE that is able to choose sub-channels from among sub-channels as discussed in claim 19 above (See column 7 lines 22-32).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beierle et al. (US006538781B1) in view of Chen et al. (US005699105A).

Claim 3 contains the limitations of claim 2 and is analyzed as previously discussed with respect to that claim. However, Beierle does not disclose that the "second adaptor sends signals to the first adaptor indicating the at least one channel for transmitting signals to the second adaptor".

Chen et al. (Chen) discloses a curbside box that is used in a CATV system that can receive broadcasts through fiber optic or coaxial lines and rebroadcast the signals within a household of the user (See Fig. 1). The curbside box contains a converter and a remote controller coupled to it. The remote controller receives signals from a set-top box (STB) indicating a channel that the user wishes to receive or "indicating the at least one channel for transmitting". The remote controller uses the signal to provide the user requested channel and transmit the signal to the user's STB (See column 2 lines 47-64 and column 4 lines 30-47). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the network node disclosed by Beierle to include a remote controller coupled to the switch matrix within the node as taught by Chen, in order to provide the user a means for controlling the node to provide the desired subscribed channels to the user's home.

Regarding claim 4, the system allows the user to input the desired channel through a hand held remote or "user input device", which communicates with the STB and remote controller (See Chen column 4 lines 30-35 and Fig. 1).

Claim 12 contains the limitations of claims 1-4 and 11 (wherein the method is preformed by the system disclosed by Beierle in view of Chen) and is analyzed as previously discussed with respect to those claims.

Claims 14, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beierle et al. (US006538781B1) in view of Feldman et al. (US006577414B1).

Regarding claim 14, Beierle et al. (Beierle) discloses a cable television system that includes a head-end transmitting signals to a plurality of users via a distribution plant, wherein the distribution plant is a fiber-optic access system connected to the head-end (See Figs. 1 and 5). However, Beierle does not disclose an additional distribution plant that is a hybrid-fiber coaxial distribution plant.

Feldman et al. (Feldman) discloses a CATV system that utilizes a FTTC/H network or "fiber-optic access system". The system includes an optical-electrical converter (OEC) that converts the optical signals to electrical signals to be distributed over the coaxial lines running through the user's home. The fiber running to the ONU and the coaxial lines running through the home of the user makes the CATV system a "hybrid-fiber coaxial distribution plant" (See column 2 line 65 – column 3 line 26 and Fig. 1). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the distribution system disclosed by Beierle to include a "hybrid-fiber coaxial distribution plant", as taught by Feldman, in order to make the system compatible with older distribution systems thereby increasing the amount of customers they can provide services to.

Furthermore, since both plants are connected to the same head-end and the OEC of the ONU is transparent to modulation format and bit rate (See column 6 lines



Art Unit: 2617

48-62), the media signals transmitted on both the coaxial system and the fiber system would have the "same bit rate".

Regarding claim 15, Feldman discloses that 64-QAM is used for the modulation format using 6-MHz spaced carriers and providing 30 Mbps, which is about "5 Msymbol per sec" (See Feldman column 6 lines 8-20).

Regarding claim 17, the CATV system disclosed by Feldman may be built as a FTTC or a FTTH system (See Feldman column 6 line 63 – column 7 line 6).

***Allowable Subject Matter***

6. Claim 9 is allowed. Applicant amended the claim to include limitations that was indicated to be allowable from the previous Office Action.

Claims 5, 13, 16, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 5 and 13, the prior art of record fails to show or fairly suggest a method or system where the first modulation format is QPSK and that it is converted into QAM format.

Regarding claim 16, the prior art of record fails to show or fairly suggest a method or system where a fiber optic system utilizes QPSK at a symbol rate of 20 Msymbol per sec.

Regarding claim 18, the prior art of record fails to show or fairly suggest a method or system where the HFC plant utilizes a modulation format that requires less spacing between RF channels compared to the fiber optic system.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-6, 9, and 11-20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The examiner suggests that applicant consider providing more details in the independent claims about the distribution plants and how they transmit the signals over the system as supported by the applicant's specification.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2617

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph G. Ustaris whose telephone number is 571-272-7383. The examiner can normally be reached on M-F 7:30-5PM; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JGU



VIVEK SRIVASTAVA  
PRIMARY EXAMINER

Application/Control Number: 09/703,857,  
Art Unit: 2617

Page 11

August 9, 2005